



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,326	07/02/2001	Katsuaki Hamamoto	010848	6711
38834	7590	03/08/2006	EXAMINER ZHENG, EVA Y	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			ART UNIT 2634	PAPER NUMBER

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/895,326

Applicant(s)

HAMAMOTO, KATSUAKI

Examiner

Eva Yi Zheng

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16,20 is/are rejected.
- 7) ☒ Claim(s) 13-15 and 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 2/21/06 have been fully considered. The improper Final rejection has been withdrawn. However, the Examiner has thoroughly reviewed Applicant's arguments but firmly believes that the cited reference reasonably and properly meet the claimed limitation as rejected. Therefore, this action is made final.

Applicant's argument – Claim 16 corresponds to the scrambling code generation apparatus of embodiment shown in Fig. 13, while rejected claim 20 is directed to a portable radio terminal shown in Fig. 13.

Examiner's response –

a) Regarding claim 16, *"a scrambling code generation apparatus generating a scrambling code used in a scrambling operation of a transmission data"*; Fig. 16 is a block diagram showing a scrambling code apparatus ([0057] in specification). *"a storage circuit storing predetermined initial values"*; block 22 in Fig. 16 shows initial values stored as $R_i = (R_{i0}, R_{i1}, R_{i2}, R_{i3})$. *"a logic circuit obtaining by a predetermined operation a matrix to determine a value of each code forming said sequence of scrambling codes based on a predetermined generating polynomial"*; shift registers (11-14), selectors (15-18) and exclusive OR circuit (20) is a logic circuit, which performs a shift operation, outputs R_{s0} as a sequence of scrambling code used in the scrambling operation with transmission data ([0061]). Fig 15 also shows this logic circuit by generation polynomial ([0025]-[0027]). The registers 11-14 are set with inputs D3, D2, D1 and D0 can be represent as a matrix ([0036]-[0051]). *"an arithmetic circuit multiplying said predetermined initial values stored in said storage circuit by said*

obtained matrix to compute a value of each code forming said sequence of scrambling codes", block 21 of Fig. 16 shows matrix, $M_{3(100)}$, $M_{2(100)}$, $M_{1(100)}$, $M_{0(100)}$ are multiplied with initial value R_i to apply to logic circuit and to generate a sequence of scrambling code. Therefore, prior art Fig. 16 and background of specification meet all claimed limitations.

b) Regarding claim 20, the background of specification states that a scrambling code operation is used in transmitting data from a portable radio terminal to a base station ([0005]). Uplink and downlink data from portable radio terminal to a base station or vice versa constitute a radio processor for processing radio communication. A portable radio terminal employing the scrambling code generation apparatus ([0006]-[0014]). Therefore, the prior art Fig. 16 and background of specification meet all claimed limitations.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 16 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by applicant's prior art (AAPA).

a) Regarding claim 16, AAPA discloses a scrambling code generation apparatus (as shown in Fig. 16) generating a scrambling code used in a scrambling operation of transmission data, comprising:

a storage circuit storing predetermined initial values (22 in Fig. 16);

a logic circuit (shift register formed of registers 11,12,13 and 14) obtaining by a predetermined operation a matrix ([0042]-[0050]) to determine a value of each code forming said sequence of scrambling codes based on a predetermined generating polynomial ([0027] " $f(x) = X^4 + X^2 + 1$ "); and

an arithmetic circuit (21 in Fig. 16) multiplying said predetermined initial values stored in said storage circuit by said obtained matrix to compute a value of each code forming said sequence of scrambling codes ([0060]).

b) Regarding claim 20, AAPA discloses a portable radio terminal of digital radio communication, comprising:

a transmission related modem (inherent as base station) modulating transmission data ([0004]-[0014]); and

a radio processor applying processing for radio communication on transmission data of said transmission related modem to send out the processed data as a transmission radio signal ([0004]-[0014]),

said transmission related modem comprising a scrambling code generation apparatus generating a scrambling code used in a scrambling operation of said transmission data ([0014]),

said scrambling code generation apparatus (as shown in Fig. 16) comprising:

a storage circuit (22 in Fig. 16) storing predetermined initial values,

a logic circuit (shift register formed of registers 11,12,13 and 14) obtaining by a predetermined operation a matrix ([0042]-[0050]) to determine a value of each code forming said sequence of scrambling codes based on a predetermined generating polynomial ([0027] " $f(x) = X^4 + X^2 + 1$ "); and

an arithmetic circuit (21 in Fig. 16) multiplying said predetermined initial values stored in said storage circuit by said obtained matrix to compute a value of each code forming said sequence of scrambling codes ([0060]).

Allowable Subject Matter

4. Claims 13-15 and 17-19 would be allowable if rewritten to overcome the objections, set forth in this Office action.

5. The following is a statement of reasons for indication of allowable subject matter:

None of the prior art teaches or suggest a scrambling code generator comprise a control circuit for controlling an arithmetic circuit and an input circuit so that the arithmetic circuit computes values of registers and the input circuit applies the computed values into the registers until all the plurality of stages of registers store the values based on the computed and input values. The shift register continues a shift operation based on valid values stored in all of the plurality of stages of registers to generate the sequence of scrambling codes.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571 272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eva Yi Zheng
Examiner
Art Unit 2634

March 3, 2006


CHIEH M. FAN
SUPERVISORY PATENT EXAMINER